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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/194,049	05/06/1999	HANS POISEL	1384.1006/JD	2739

7590 03/31/2003
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EXAMINER

MOSKOWITZ, NELSON

ART UNIT	PAPER NUMBER
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3663

DATE MAILED: 03/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/194,049

Applicant(s)

POISEL, HANS

Examiner

Nelson Moskowitz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 May 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. The request filed on January 21, 2003 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) is acceptable and a CPA has been established. An action on the CPA follows.
2. Applicant's amendment received January 21, 2003 has been made of record and the amendments have been entered.
3. The text of those section of title 35 U.S. code not included in this action can be found in a prior Office action.
4. The specification is objected to as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention.

The claim terminology "elastic dispersion" is indefinite and appears to have been given differing definitions by applicant. Claim 1, as filed, defined "elastic dispersion" as the wavelength of diffused light corresponds to the wavelength of the irradiated light. In a June 23, 1998 letter to the European Patent Office applicant defined "elastic dispersion" to mean light incident on the fiber is deviated in the fiber in the direction of the fiber axis invariant of wavelength, and stressed the criticality of this definition in view of applied prior art. Applicant's specification implies an equivalence of "elastic dispersion" with stimulated emission. It is noted that stimulated emission is not an elastic dispersion process.

It is noted that the FIBER OPTICS STANDARD DICTIONARY (third edition, Weik) contains no definition of elastic dispersion and a text search of this terminology in patent and

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non-patent data bases has not produced a reference using this terminology for optical systems, and applicant has not provided any.

Thus, the metes and bounds of the above cited disclosures can not be determined with a reasonable degree of certainty by one skilled in this art. The cited phrase is not clearly defined in the specification or prior art, and it appears to be an erroneous statements of principles physics .

Applicant's assertion (page 5) that "elastic dispersion was used to describe a diffusion or scattering of the incident light without a change in the wavelength of the incident light" amounts to applicant choosing, long after the priority date, one of the multiple definitions given by applicant to this term. Therefore, one of ordinary skill in this art with applicant's disclosure before him would not know which definition to choose.

Furthermore, applicant's recitation (specification at page 5, line 2 of the last paragraph) calls for the optical signals to be radially radiated into the fiber. This is antithetical to the claimed requirement that the signal light is radiated between 0 and 90 degrees. At 0 degrees the signal is no longer radial to the fiber.

5. Claims 18-24 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. As one skilled in this art would not know what elastic dispersion is, for the reasons given in section 4, above, the artisan would be unable to determine which synthetic materials are capable of causing the claimed elastic dispersion of optical signals, and how to situate the fiber

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and signal to be radial and yet at 90 degrees to each other, and would therefore be unable to make and use the claimed receiver. In addition, applicant has stated in his specification (page 4, four lines from the bottom of that page) that “An essential aspect of the idea supporting the invention is the elastic dispersion of the incident light ...”(emphasis added). Thus, an essential aspect of the invention is indefinite and confusing to the artisan.

Furthermore, applicant has not shown how light “P” which is incident on the amplifying fiber 1, reaches the fiber core for amplification. As waveguide fibers have a core and a cladding, light incident on the cladding will be reflected or refracted away from the core of the fiber, and thus the signal will not be amplified.

6. Claims 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erdogan et al .

In determining obviousness, the following factual determinations are made:

- a. first, the scope and content of the prior art;
- b. second, the difference between the prior art and the pending claims.
- c. third, the level of skill of a person ordinary skill in this art; and
- d. fourth, whether other objective evidence may be present, which indicates obviousness or nonobviousness. See, e.g., *In re Dembiczak*, 175 F.3d 994, 998, 50 USPQ2d 1614, 1616 (Fed. Cir. 1999) (citing *Graham v. John Deere Co.*, 282 US 1, 17-18, USPQ 456, 466-67 (1966)).

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Objective evidence includes long felt but unmet need for the claimed invention, failure of others to solve the problem addressed by the claimed invention, and not other factors. See, e.g., *Simmons Fastener Corp. v. Illinois Tool Works, Inc.*, 739 Fed. 1573, 1574-76, 22 USPQ 744, 745-47 (Fed. Cir. 1984).

In examining the scope and content of the prior art it is found that Erdogan discloses the claimed invention except for the detector. However, this reference discloses the fiber amplifier for use in communication systems. As communication systems always have receivers it would have been obvious to one of ordinary skill in this art to have a receiver in the Erdogan system.

In addition, Erdogan's disclosure of the signal radiation being directed to the fiber at 0 degrees to the radiation surface, meets this limitation in all the independent claims.

Third, under *Deere* the level of ordinary skill in this art may be determined by the analysis of the Court as set forth in *Environmental Design Ltd. v. Union Oil Co.* 713 F.3d 693, 218 USPQ 865-69 (Fed. Cir. 1983) cert. denied, 464 U.S. (1984), where the court listed these factors relevant to the determination of the level of ordinary skill: type of problems encountered in the art, prior art solutions, rapidity of innovations, sophistication of technology, and educational level of the active worker in the field.

The types of problems encountered in the art involve low signal power, and how to provide accurate and reliable data from the signals.

Innovation in this field has been very fast as can be seen from virtual birth of this field in the 1960s to its present highly complex and sophisticated status.

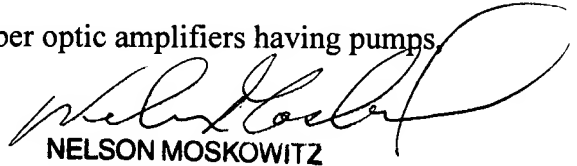
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Prior art solutions include using fiber optic amplifiers to amplify signals. Skilled artisans generally have a college level education and over three (3) years of experience, as can be seen from published articles in the major journals in this field.

To date, no secondary considerations (objective evidence) have been presented.

Therefore, in view of Erdogan it would have been obvious to one skilled in the art to use a detector for the communication system.

7. The drawing is objected to for not depicting all of the claim limitations (detector, filter, etc.). Correction is required.
8. The abstract is objected to as it is too long. Correction is required.
9. References B (PTO-892) is cited to show prior art fiber optic amplifiers having pumps, filters and incident signal radiation.


NELSON MOSKOWITZ
PRIMARY EXAMINER